

while the excited region remains in an excited state, wherein the activation of said impurity ions implanted heavily occurs as the step of said implanting impurity ions is performed.

42. (New) The method of claim 41, wherein the gate insulating layer is formed by depositing silicon dioxide or silicon nitride on a glass substrate.

43. (New) The method of claim 41, wherein the active layer is formed by depositing undoped polycrystalline silicon.

44. (New) The method of claim 43, wherein the undoped polycrystalline silicon has a thickness of between about 400 and 800 Å.

45. (New) The method of claim 43, wherein the active layer is formed using chemical vapor deposition process.

46. (New) The method of claim 41, wherein the active layer is formed by depositing amorphous silicon and crystallizing the amorphous silicon by laser annealing.

47. (New) The method of claim 41, wherein the exposed portion of the active layer is formed by the steps of depositing an another layer of silicon dioxide on the gate insulating layer to cover the active layer; depositing a conductive material on the another layer of silicon dioxide; and patterning the conductive material and the another layer of silicon dioxide to form an insulating layer and to form the gate over a selected portion of the active layer.

48. (New) The method of claim 47, wherein the gate insulating layer and the gate comprise a thickness of about 500-1500 Å and, about 1500-2500 Å, respectively.

49. (New) The method of claim 41, wherein said hydrogen ions are implanted with

implantation energy between about 50 and 150 KeV.

50. (New) The method of claim 41, wherein said hydrogen ions are implanted with a dose of between about 5×10^{14} - 5×10^{16} ions/cm².

51. (New) The method of claim 49, wherein said hydrogen ions are implanted to heat up the excited region to a temperature between about 200-300 degrees Celsius.

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52. (New) The method of claim 50, wherein said hydrogen ions are implanted to heat up the excited region to a temperature between about 200-300 degrees Celsius.

53. (New) The method of claim 41, wherein said hydrogen ions are implanted in the active layer and simultaneously form the impurity region.

54. (New) The method of claim 41, wherein the hydrogen ion implantation time is proportionately related to the size of the active layer.

55. (New) A thin film transistor prepared by a process comprising: forming a gate insulating layer on an active layer; forming a gate on the gate insulating layer; forming an excited region in an exposed portion of the active layer by implanting hydrogen ions to the active layer by using the gate as a mask; and forming an impurity region by heavily implanting impurity ions to said excited region while the excited region remains in an excited state, wherein the activation of said impurity ions implanted heavily occurs as the step of said implanting impurity ions is performed.

56. (New) The thin film transistor of claim 55, wherein the gate insulating layer is formed by depositing silicon dioxide or silicon nitride on a glass substrate, and the active layer is formed by depositing undoped polycrystalline silicon.